

REMARKS

The Official Action of April 21, 2003, and the prior art relied upon therein have been carefully reviewed. The claims in the application are now claims 5-10, and these claims define patentable subject matter warranting their allowance. Applicant accordingly respectfully requests favorable reconsideration and allowance.

Acknowledgement by the PTO of the receipt of applicant's papers filed under Section 119 is noted.

The restriction requirement has been repeated and made final, whereby claim 5 has been withdrawn from further consideration. Applicant again respectfully traverses the requirement, and requests that claim 5 be joined with the other claims, examined and allowed.

Claim 5 has now been amended above to make it depend from new claim 6. There can now be no question that the situation is controlled by MPEP 806.05(c), part II, because the sub-combination of Group I (now claim 6) is explicitly called for in claim 5, i.e. it is essential to the combination of Group II.

If the PTO maintains its position and refuses to examine claim 5, then applicant will reserve the right to

petition this matter. A petition can be filed at any time up to the time of filing of Notice of Appeal.

Applicant's Abstract has been criticized as containing more than 150 words, and so correction has been required.

As amended above, there is now no question that the Abstract contains fewer than 150 words.

Claims 1-4 have been rejected under the second paragraph of Section 112. The rejection is respectfully traversed.

Applicant appreciates the examiner's helpful suggestions. Nevertheless, claims 1-4 have been deleted and have been replaced by new claims 6-10. In drafting these new claims, the examiner's helpful comments have been taken into account.

For the record, however, applicant believes that the claims as originally drafted, considered in light of applicant's specification (fully consistent with the law), would not have been confusing to those skilled in the art, and therefore the claims in their previous form are fully in accordance with Section 112. At **worst**, the original claims might be considered objectionable, but **only** as to form.

Therefore, the changes introduced in the new claims in comparison with the original claims are cosmetic only, i.e.

they are only of a formal nature made to place the claims in better form consistent with U.S. practice. Such amendments are not "narrowing" amendments because the scope of the claims has not been reduced. No limitations have been added and none are intended; the meaning of the claims remains the same.

Applicant respectfully requests acquiescence from the PTO that applicant's claims meet the requirements of Section 112.

Claims 1-4 have been rejected under Section 102 as anticipated by Mehl et al WO 98/08594 ("Mehl"). This rejection is respectfully traversed.

Mehl discloses microporous elements and filters comprising such microporous elements. The microporous elements are linked to a support member in the form of an elongated tube, noting for example Figs. 1, 3 and 4, and as mentioned on page 8, lines 14-18, the latter of which specifies that "the microporous element is generated at or near to the smaller cross-section end" of the tube.

Mehl thus discloses single supports containing single microporous elements, although a plurality of such supports may be arranged in parallel alignment to form "a multiple channel filter element" (page 40, first and second paragraphs). Mehl does not contain any disclosure or even any

concept of providing a carrier in the form of a sheet or film having a plurality of holes extending therethrough.

Accordingly, in contrast to Mehl, the substrate of the present invention is in the form of such a film or sheet having a plurality of discrete through holes. Mehl does not anticipate any of applicant's claims, and applicant respectfully requests acquiescence of the PTO of the non-applicability of Mehl.

Claims 1-4 have also been rejected under Section 102 as anticipated by Düsterhöft et al USP 6,451,260 ("Düsterhöft"). This rejection is respectfully traversed.

First, applicant respectfully notes that Düsterhöft corresponds to Mehl, noting item (87) on the face page of Düsterhöft. Thus, Düsterhöft corresponds with PCT publication No. WO/98/08594, which is Mehl. Applicant respectfully notes Figs. 1, 3 and 4 which correspond to the same figures referred to above in applicant's traversal of the rejection based on Mehl. Applicant accordingly respectfully repeats by reference the commentary made above against the rejection based on Mehl.

The rejection focuses on three parts of Düsterhöft, namely a part of column 3, a part of column 5, and claim 21. The disclosure at column 3, lines 37-60 contains no disclosure and no suggestion of a substrate made of non-porous material in the form of a film or sheet, as called for in claim 6. (It

also contains no disclosure or suggestion of "a substrate having a plurality of discrete, regularly arranged through-holes" as called for in claim 1).

The disclosure at column 5, lines 26-42 concerns an alternative embodiment wherein the "substance", i.e. "a solution or suspension of a polymer in a solvent" (column 2, lines 28 and 29), is applied to a microporous retainer which "is preferably in the form of a disk, grid, large-pore membrane, membrane with supporting fabric, membrane with woven or unwoven characteristics, net, plate, rod and/or truncated cone." Applicant does not see that this is a disclosure of the subject matter of claim 6, or even of claim 1.

Claim 21 depends from claim 18 which depends from claim 17, which depends from claim 10, the latter of which states that the support "has the form of a tube, at least a section of said tube being conical in form", and wherein "the microporous element [presumably the microporous retainer recited in the dependent portion of claim 21] is generated at or near the smaller cross-section end of the conical section of said tube...". This clearly is a disclosure of neither claim 6 nor claim 1.

As best understood, the "retainer" of claim 21 and of the alternative embodiment described at column 5, lines 26-42, is the element "1" in Fig. 3 (see column 23, lines 7-14

and 41) or the element "1" of Fig. 4 (column 25, lines 33-39, 48, 51 and 60) or possibly even the element "1" of Fig. 5 (column 26, lines 4, 11 and 19). Düsterhöft does not disclose a substrate or support member as claimed. The reaction probe chip of the present invention comprises a substrate in the form of a film or sheet having a plurality of discrete through-holes.

Applicant requests confirmation from the PTO that Düsterhöft does not disclose applicant's claimed subject matter.

Claims 1 and 4 have been rejected under Section 102 as anticipated by Beattie USP 5,843,767 ("Beattie"). This rejection is respectfully traversed.

As the rejection correctly points out, Beattie discloses that the carrier through which through-holes extend is a nano-porous wafer. Thus, the substrate or carrier of Beatty is, and must be, made of a microporous material such as nano-channel glass or microporous silicon as shown in Figs. 1-4 and described in the Beattie specification. Because the substrate is made of a microporous material, a probe is immobilized on the sidewalls of the channels extending through the substrate, as perhaps best summarized in claim 1 of Beattie.

The rejection focuses on Example 11 at columns 21 and 22. Here also it is made clear that the silicon wafer having integral sample wells is "porous" (column 21, line 62; column 22, lines 9, 15, 35, 37, 41, 44 and 45).

Contrary to Beattie, the substrate in the present invention is a non-porous material such as glass, silicon or plastic, and the probe is not immobilized on the walls of the through-holes extending through the substrate, but is instead fixed on a carrier placed within the holes.

Beattie does not disclose applicant's claimed subject matter. Applicant respectfully requests confirmation from the PTO that applicant's claims define over Beattie.

Claims 1 and 2 have been rejected under Section 102 as anticipated by Keder et al USP 6,083,761 ("Keder"). This rejection is respectfully traversed.

Keder discloses a multi-well plate system for handling articles such as plastic beads, suspended in a liquid and a method for identifying compounds by using the system. The multi-well plate comprises a plurality of wells each of which has a capillary hole that is adapted to (i) retain articles in the well, and (ii) retain liquid in the well while the liquid is not subjected to extrinsic forces, such as centrifugation or vacuum. The wells have a capillary hole which is closed while no extrinsic forces are applied to the

liquid, and when extrinsic force such as centrifugation or differential pressure is applied, the hole opens. Thus, the through-hole (capillary hole) is not always open.

As perhaps best summarized in the Keder abstract and claim 1 of Keder, the wells of the Keder device are used to retain liquid for a certain period of time to cause an intended chemical reaction, afterwhich the liquid is then transferred through the capillary hole into a holding vessel. The purpose of Keder is therefore quite different from that of the present invention, and consequently the claimed device of the present invention is importantly different from the device of Keder.

Among the important differences are (1) Keder does not provide a substrate in the form of a film or sheet as claimed; (2) Keder does not disclose a carrier made of porous material filled in the plurality of discrete through-holes s claimed; and (3) Keder does not disclose different probe molecules attached to surfaces of carriers in different through-holes as claimed.

Keder does not anticipate the subject matter of applicant's claims. Accordingly, applicant respectfully requests the PTO to confirm that applicant's claims define over Keder.

Appln. No. 10/220,034
Amd. dated Monday, September 22, 2003
Reply to Office Action of April 21, 2003

No rejections have been imposed under Section 103.
Applicant accordingly understands that no issue exists as to
obviousness. Applicant is proceeding in reliance thereof.


Applicant respectfully requests favorable
reconsideration and allowance.

Applicant respectfully awaits the results of a first
examination on the merits.

Respectfully submitted,

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